DOCUMENT RESUME

ED 418 680 HE 031 229

AUTHOR	Kaganoff, Tessa
TITLE	Cost-Cutting in Higher Education: Lessons Learned from Collaboration, Technology, and Outsourcing Initiatives. Draft.
INSTITUTION	Rand Corp., Santa Monica, CA.
SPONS AGENCY	Foundation for Independent Higher Education.; Andrew W. Mellon Foundation, New York, NY.
REPORT NO	DRU-1793-FIHE
PUB DATE	1998-01-00
NOTE	53p.
PUB TYPE	Information Analyses (070) -- Opinion Papers (120) -- Reports - Evaluative (142)
EDRS PRICE	EDRS Price MF01 Plus Postage. PC Not Available from EDRS.
DESCRIPTORS	Consortia; Cooperation; Cost Effectiveness; Distance Education; *Educational Cooperation; *Higher Education; Institutional Cooperation; Paying for College; Private Schools; *Technology; Trend Analysis
IDENTIFIERS	League for Innovation in the Community College; National Assn Independent Colleges Universities; *Outsourcing

ABSTRACT

This document presents a review of cost-containment initiatives relevant to higher education institutions. Originally commissioned to examine cost containment initiatives carried out by institutions affiliated with the Foundation for Independent Higher Education (FIHE), the paper was expanded to include a sector-wide review of three types of cost-cutting initiatives--collaboration, technology, and outsourcing. The paper is organized around an introduction, which covers the background, purpose, methodology, and organization of the study, and separate sections that discuss benefits and limitations, provide examples, and make recommendations for each type of initiative. A final section deals with efforts by the three California state higher education systems to improve efficiency and maintain quality through short-term cost reductions, such as salary and hiring freezes, across-the-board cuts in various services, and early retirement incentives, and long-term cost reduction and quality improvement incentives such as total quality management and resource cost management. Also noted are programs reported by the National Association of Independent Colleges and Universities, the Center for Planning Information, and the League for Innovation in the Community Colleges. Appendixes include the FIHE survey results; a descriptive of a Partnership for Private Colleges program; additional data sources; and a list of key questions for higher education decision makers. (Contains 74 references.) (CH)

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Cost-Cutting in Higher Education: Lessons Learned from Collaboration, Technology, and Outsourcing Initiatives

Tessa Kaganoff

DRU-1793-FIHE

January 1998

Prepared for the Foundation for Independent Higher Education

RAND

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ACKNOWLEDGMENTS

I would like to thank FIHE for funding this work and John Carr and Ruth Frey in particular for their insights and suggestions throughout the project. I also appreciate the guidance and input from Roger Benjamin here at RAND. In addition, Cathy Krop and Susan Gates, and Laura Zakaras provided very useful suggestions to improve the content, structure and style of the document.

PREFACE

There is a growing perception that college costs are increasing at a disproportionately higher rate than the public's ability to pay. In response, colleges and universities are placing greater emphasis on their efforts to contain costs. However, little is known about which methods of cost-cutting are more or less successful and what trade-offs are associated with each. The Foundation for Independent Higher Education (FIHE), with support from the Mellon Foundation, is currently involved in efforts to fund institutional efforts to cut costs so FIHE asked RAND to review the literature on cost-containment efforts in higher education and compile the "lessons learned" from these efforts. Their hope is that institution-level decisionmakers will draw on the experience of others as they plan changes at their own institutions.

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SUMMARY

Discussions about the condition of higher education in America increasingly focus on rising costs. The academic literature and the popular press are filled with commentary about the public's increasing inability and unwillingness to pay for the rising cost of college. At the same time that costs are increasing, public sector financial support for higher education is decreasing, putting more pressure on higher education institutions to make changes. As institutions of higher education have come under increasing pressure to cut costs, it has become more important to understand the impact of cost-cutting initiatives that are already underway.

Originally commissioned to examine a Foundation for Independent Higher Education (FIHE) survey of cost containment initiatives carried out by the 635 FIHE-affiliated institutions, this paper goes beyond the survey and presents a higher education sector-wide review of cost-containment initiatives that might have relevance to FIHE affiliated institutions, but can also inform other types of institutions. In this paper we explore three types of cost-cutting initiatives in detail (collaboration, technology, and outsourcing) to better understand the benefits and limitations of each. Examples of each type of initiative are provided, along with recommendations about how best to implement them.

INITIATIVES

Collaboration

Collaboration, as with the other types of initiatives, has both advantages and disadvantages. Collaboration involves multiple organizations working together and may involve any type of partner organization, whether higher education institutions, private sector institutions (businesses), government agencies, community agencies, K–12 schools, or foundations. The scale can vary both in terms of the number of institutions involved, and in how many departments or offices in each campus are involved.

By working together, schools can learn from one another, share resources (such as technology, facilities or even expertise), and offer programs that they otherwise would not be able to. Joint purchasing agreements to obtain group discounts are possible, as is reducing administrative costs by avoiding duplication of services across campuses. Individuals involved in collaboration can personally benefit from the opportunity to work with

colleagues at other institutions, and in this way make new personal and professional contacts.

Collaborative work may be a slow process, as people learn to work together and build trust. In fact, building the relationship can be as difficult as carrying out the work of the collaboration. Participants must come up with common goals and measures of success and faculty who are used to working independently may have trouble adjusting to working as part of a team.

- *Example: Southeastern Pennsylvania Consortium for Higher Education.* A group of eight small private colleges in Pennsylvania formed the Southeastern Pennsylvania Consortium for Higher Education in an effort to cut costs. The schools are collaborating on technology purchases and networking. In addition, faculty at any one institution not teaching a full load may be loaned to one of the other campuses (which can save campuses between $2,000 and $4,250 per course).

Technology

Technology innovations range from machines that automate processes that were done manually to sophisticated equipment that enable processing of massive amounts of information or teleconferencing and distance education. Increased use of technology is generally accepted with support functions, but may be questioned for core services (especially instruction) in which personal contact is still considered necessary by many.

Technology is already increasing access to higher education by giving more students (even remotely situated ones) access to instruction through distance education. It also increases individuals' access to greater amounts of information and makes it easier to manage large amounts of information. Schools can put information on-line so that it can obtained at any time, from any place. Furthermore, procedures are being sped up by doing them electronically rather than manually. And with technology, faculty can more easily customize instruction for students.

Two major concerns with technology relate to its cost and teaching/learning models. First, the front-end cost of technology is a major obstacle for many institutions–the cost of hardware, software, and staff to support the equipment. Second, the traditional view of instruction involves interaction between the instructor and the student, and it is not readily apparent to many how technology fits into that paradigm. There are few technology-based instruction models. In addition, technology is not part of the reward structure at most institutions.

- *Example: Rensselaer Polytechnic Institute (RPI).* RPI faced a $25-million structural deficit and wanted to revitalize its introductory math

and science courses. The school replaced some lecture courses with "studio" courses, which are more interactive learning experiences for students. It redesigned the physical space so that students now work at multimedia-based workstations. RPI is reporting savings of between $10,000 and $150,000 per course.

Outsourcing

Outsourcing is the process of contracting with an outside vendor to provide a service rather than the campus providing the service itself. This has more often been done with support services in the past, but there is increasing interest in outsourcing core services.

Institutions can bring new expertise, technology or services onto campus without having to hire someone on staff. A primary, but somewhat indirect benefit is that by outsourcing even just one function, the campus introduces the concept of competition to the campus. In theory, the threat of contracting out will lead to improvements all over campus.

A school may not have the staff or expertise required to manage a contract (writing it initially and monitoring the terms). Alternative service providers must be available, so that there is competition for the contract itself. While many concerns can be addressed in the development of a contract, some critics fear that outside vendors may not understand the culture and mission of the campus. And, if a school lays off personnel as a result of contracting out work, morale on campus may be adversely affected.

- *Example: University of Pennsylvania*. In an effort to save money on facilities management, the university hired a real-estate-management business to manage both its on- and off-campus facilities. Through this outsourcing effort the university hopes to save as much as 15% of its $100 million facilities budget.

Conclusion

There are many other options for cutting costs than those documented here in addition to other ways of categorizing the cost-cutting activities we have described. Since past lessons learned and costs savings have not been documented in any systematic fashion, foundations should consider including an evaluation component in their grants to ensure that appropriate data are gathered and that lessons learned can be shared. It would be in everyone's best interest to collect such data.

I. INTRODUCTION

BACKGROUND

Discussions about the condition of higher education in America increasingly focus on rising costs. The academic literature and the popular press are filled with commentary about the public's increasing inability and unwillingness to pay for the rising price of college (Larson, 1997; Elfin, 1996; Guskin, 1994; Massy & Wilger, 1992). Evidence of the widespread concern about rising costs is the recently convened National Commission on the Cost of Higher Education, established by Congress in June, 1997. The Commission's mandate is to compile information about the efforts that institutions across the country are undertaking to control costs.[1] In the commission's final report (1998), *Straight Talk About College Costs and Prices*, the authors note: "The phenomenon of rising college tuition evokes a public reaction that is sometimes compared to the 'sticker shock' of buying a new car" (p. 2). In addition, the Council for Aid to Education (CAE)[2] recently released the results of a 2-year study on America's national investment in higher education (money spent by the federal, state, and local government to support higher education) conducted by the Commission on the National Investment in Higher Education (CAE, 1997). The principal conclusion of the report is that public funding is not keeping pace with costs and demand. CAE offers a two-pronged strategy to address the disparity: 1) increased public sector financial investment in higher education and 2) comprehensive reform of higher education institutions to lower costs and improve services.

Indeed, as public sector financial support for higher education is decreasing, the cost of providing higher education appears to be increasing. The cost of resources for higher education, which is calculated as the Higher Education Price Index (HEPI), has been increasing at a faster rate than the Consumer Price Index (CPI). The authors of the CAE report calculated that, between 1961 and 1995, the HEPI had more than a sixfold rise, which is a one percent higher rate than inflation as measured by the CPI. As a result of rising costs for the inputs to higher education and decreasing public sector

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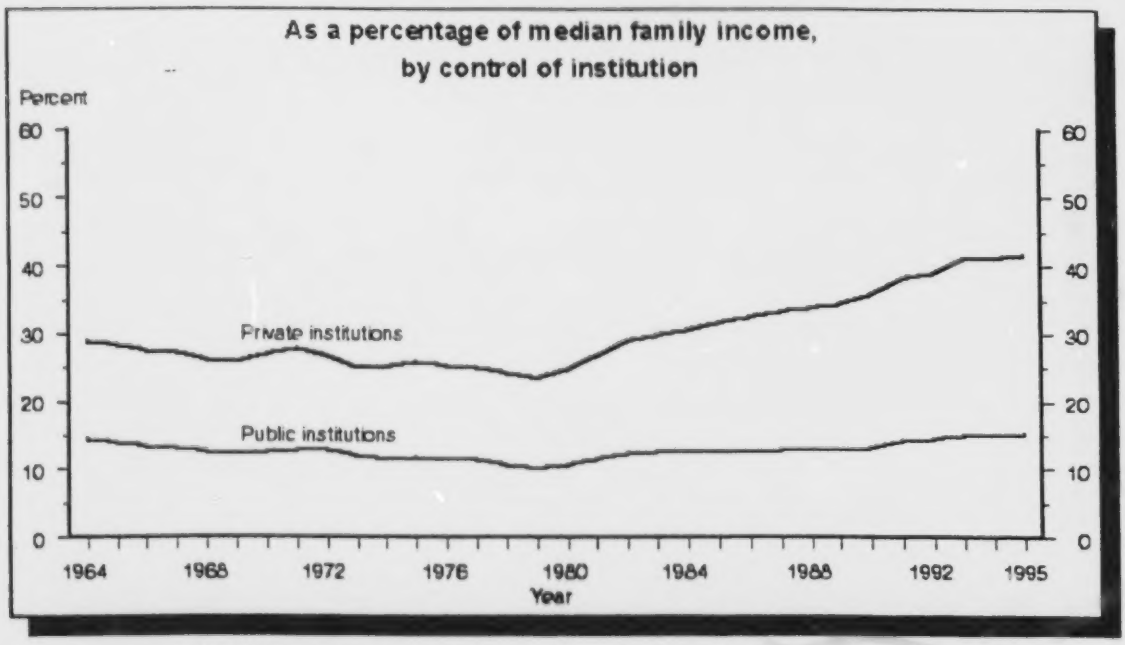
[1] In order to inform the work of the commission, the President of the American Council for Education requested that college and university presidents send whatever documents or reports they have that describe factors influencing tuition increases and the efforts taken to reduce or contain costs and thereby reduce the need for tuition increases (e.g., administrative reengineering; efficiencies in purchasing, energy use, or other areas; consolidation of academic programs or operations; and other cost-containment efforts) (Ikenberry, 1997b).

[2] CAE is a subsidiary of RAND.

financial support, schools are charging students ever-higher tuition. Tuition and fees at private institutions have been rising at a much higher rate than inflation and have demanded an increasingly larger share of family income (see Figure 1).

Figure 1

Average Undergraduate Tuition, and Room and Board as a Percentage of Income of all Families 1964-1995



Source: U.S. Department of Education, National Center for Education Statistics, *Digest of Education Statistics*, 1996

College prices (including tuition, and room and board) at private colleges rose from $9,908 to $17,474 between 1980 and 1995 (in 1996 constant dollars). College prices also rose at public colleges during the same period, but not by as much, from $4,298 to $6,349 (U.S. Department of Education, 1996). At the same time that prices have been rising, institutional aid has been increasing, although not at a high enough rate to close the gap (see Table 1).

Table 1
Total Price of College

	Public Four-year		Private Four-year		Public Two-year	
	1987	1996	1987	1996	1987	1996
Total per-student price	$5,146	$10,759	$10,896	$20,003	$2,808	$6,761
Percent change		(109%)		(84%)		(141%)
Total price minus grants	$4,385	$9,365	$8,307	$15,069	$2,345	$6,067
Percent change		(114%)		(81%)		(159%)
Total price minus all aid	$3,715	$7,262	$6,823	$11,205	$2,125	$5,717
Percent Change		(95%)		(64%)		(169%)

Source: National Postsecondary Aid Study, 1996, in The National Commission on the Cost of Higher Education, *Straight Talk About College Costs and Prices*, 1998.

PURPOSE

With the growing perception that college is becoming less affordable and the corresponding interest in cost control on college and university campuses, institutions are increasingly searching for ways to cut costs. Because of this interest it is important to understand cost-cutting initiatives that are currently underway and what they have or have not accomplished so that education administrators can make informed decisions about what to do on their own campuses and successfully replicate others' programs. Originally commissioned to examine a Foundation for Independent Higher Education (FIHE) survey of cost containment initiatives carried out by the 635 FIHE-affiliated institutions, this paper goes beyond the survey and presents a higher education sector-wide review of cost-containment initiatives that might have relevance to FIHE affiliated institutions, but can also inform other types of institutions.[1]

FIHE was primarily interested in three types of initiatives: collaboration, technology and outsourcing, so we focus on those three. While FIHE chose to break down cost-cutting initiatives along these dimensions, there are others ways of thinking about cost cutting (whether initiatives are targeted at administration, student affairs, or instruction, for example). In addition, there are types of initiatives which do not fall into these categories (such as hiring freezes and deferring maintenance). This document will

[1] FIHE institutions are primarily four year, often small, liberal arts colleges that face particular challenges in containing costs. For example, they must maintain minimum core administrative and academic functions that would appear difficult to eliminate. At the same time, FIHE institutions may be more readily able to respond quickly to the need for change than their larger counterparts since they typically have relatively smaller bureaucracies.

provide the reader with detailed information about these three types of initiatives, as well as a glimpse at some other types of initiatives being implemented.

In this paper we describe the advantages and disadvantages of each, provide examples of institutions that have implemented these initiatives, and identify factors to consider when implementing each one of them. This document, and this framework in particular (including benefits and limitations, examples, and recommendations) will help higher-education decisionmakers make more informed choices about cost-containment. It also illustrates that it is difficult to compare across institutions given the lack of standardization in the way efforts are documented.

Foundation for Independent Higher Education

In the summer of 1996, FIHE conducted a survey to learn more about the cost-containment activities in which its affiliated colleges were engaged. The survey asked respondents to describe their most innovative collaboration, technology, and outsourcing cost-containment initiatives. Not only did the survey gather information about current initiatives, it also asked schools to describe their "aspirations" (a major new initiative they would develop if they had access to new seed money). Between current projects and aspirations, the 251 respondents described over 2,000 initiatives.

The respondents represented a variety of perspectives from the different campuses – academic departments, student affairs, academic officers, libraries, etc. Respondents described the goals of the current initiatives, total costs (start-up and operational), the financial benefits (annual benefit and expected project life) and non-financial benefits.

Of the initiatives that respondents described, about half of the current initiatives were categorized as "collaboration," compared to one-third as "technology" and 15 percent as "outsourcing." However, the breakdown for aspirations was quite different. Sixty percent described technology-related aspirations, compared to 28 percent collaboration and only 4 percent outsourcing. However, there can be considerable overlap between the various categories. An example is different colleges working together to electronically share library holdings. Some colleges refer to such initiatives as *collaboration* while other colleges consider them to be an example of *technology*.[4]

The initiatives they listed were most likely to address instruction and academic support (38 percent), followed by student services (27 percent), institutional support (16 percent), and enrollment management and auxiliary enterprises (11 percent). The focus of aspiration projects would be very

[4] We accepted the respondent's categorization of their efforts.

similar to current projects, although more of the projects would be technology-based rather than collaboration-based (see Appendix A for tables).

METHODOLOGY

Through a literature search and conversations with experts in higher education (primarily researchers and policymakers), we have compiled a review of documentation on the topic of cost cutting in higher education. The literature review consisted of documents gathered from multiple sources, including RAND publications and the RAND library, ERIC (Education Research Information Clearinghouse), and FIHE. Key terms (such as cost-cutting, cost-containment, and productivity) were used to search the library resources as well as the internet more generally. In addition to searching by key terms, individual institution and consortia names were used as searching devices. FIHE provided RAND with documents and with copies of proposals addressing collaboration, technology, and outsourcing submitted by their affiliated colleges for various grant campaigns. While we had some interest in broader trends, we were primarily interested in the three types of initiatives identified by FIHE: collaboration, technology, and outsourcing.

The collected documents were read to assess their relevance to our research questions. In some cases, research done at the K-12 level (kindergarten through high school) informed the analysis for higher education. In addition, there was little documentation on outsourcing in higher education so we looked at the outsourcing literature in other sectors, particularly at RAND research on outsourcing in the military.

A majority of the literature we collected was more conceptual (theoretical) in nature or descriptive, but little of it was evaluative (actually analyzing initiatives, what worked and what did not, why things succeeded or failed, how much money was saved and how). We collected some descriptions of individual campus efforts in each area and include them in the discussion of each type of initiative. These are neither "best" nor "worst" examples, these simply illustrate what institutions are doing in each category–and the tremendous variation (such as initiatives varying in scope and being targeted at different functional areas). These examples also illustrate that many initiatives may bridge two categories, particularly technology and collaboration.

Unfortunately, it was beyond the scope of this project to interview administrators responsible for implementing the reforms described herein or to contact institutions that have not published any written material on their efforts. Because of the limitations with the published literature, this is more a snapshot of what schools are doing to contain costs, rather than a fully-exhaustive picture.

ORGANIZATION

Section 2 describes collaboration, Section 3, technology, and Section 4, outsourcing in detail. In these three sections we describe each type of innovation and the reasons why a campus might choose to implement it. With each of the three types of innovations there is the promise of cost savings and also the concern about maintaining quality. We discuss in detail some of the benefits and limitations associated with each. We also list examples of institutions that have adopted the initiative, and any additional descriptive information and analysis we have, such as reported savings and whether the initiative relates to "core" or supporting activities. By "core," we mean anything that is directly related to teaching and learning.[5] Due to limitations in the literature we collected, we usually do not know the method by which savings were calculated. Furthermore, there is generally little analysis of how or why reforms worked or did not work. Each section concludes with "recommendations" based on a review of all of the literature concerning that particular type of cost-cutting initiative.

These initiatives are presented as separate categories although there can be overlap among them. Section 5 provides a description of additional types of cost-containment initiatives and their prevalence to some degree. In the final section we recommend ways to improve documentation of cost-containment initiatives. The appendices include additional results from FIHE's survey on cost-containment efforts and a description of their *Partnership for Private Colleges Campaign*. The appendices also include a description of sources of financial support and information on cost-containment, as well as questions that can guide institution-level decisionmakers as they embark on cost-containment efforts.

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[5] Core activities are those that are integral to the output of the institution (student learning), and typically include instruction, research, and service. It is usually easier to make cuts in supporting areas and not core areas, although costs associated with core activities make up a much greater portion of the total budget.

II. COLLABORATION

Collaboration can mean different things to different people and is referred to by other labels, such as partnerships, consortium and cooperation. Collaboration is essentially multiple parties working together. Traditionally, collaboration was thought more of as a way for sharing resources but is now more often seen as a way for doing more with less. The potential for collaboration between institutions (even those in different geographic areas) has been greatly influenced by advances in technology, which is facilitating communication and providing more avenues for working together.

Collaboration can occur between multiple higher education institutions, with private-sector institutions (businesses), government agencies, community agencies, K–12 schools, and foundations. For this reason, these types of arrangements can accomplish a variety of goals. And, the scale can vary from one or two campuses working together, to larger regional or national consortia consisting of numerous schools. The scale can also vary in terms of being built around a single project or topic (with select individuals being involved), or it may be more encompassing, involving an entire campus. The goals of the partnership generally dictate who and how many campuses are involved. Schools tend to ally with other institutions in their geographical area (although schools in close proximity may also compete for students and resources).

BENEFITS

The benefits of collaboration are especially pronounced for smaller institutions which tend to have more limited resources. By working together, schools can learn from one another and share resources with one another. Not only can they pool resources (such as technology, facilities or even expertise), but they also offer joint programs. By working with partner schools, campuses can purchase (and provide) services that they otherwise could not afford. Collaborations can provide leveraging power, enabling groups of schools to enter into more-favorable purchasing agreements. However, in the case of purchasing agreements the collaboration is often more about being a "smart customer" (joining a group to get a group discount) than about actually working together (such as would be required to develop new curriculum). The Council of Independent Colleges in Virginia is a group of 17 independent nonprofit colleges and universities in Virginia that joined together to purchase a contract with a long-distance network carrier. As a group, they expect to save a total of $4.65 million over the three-year period of the contract (Wesolowski, 1994).

Institutions can reduce administrative costs by participating in partnerships, if the relationship enables them to avoid duplication of services. Instead of each school administering a particular type of program, the group can operate programs together and spend only a fraction of what it would cost to do it alone. A good example is campuses coming together to provide joint training to campus employees. Applications of this might be in areas where each campus has a limited number of staff, so that economies of scale could be achieved by doing joint training with other institutions (such as financial aid staff or security officers).

The benefits of collaboration can also accrue to the individuals involved. Individual participants can find collaboration to be stimulating, challenging and fun (Baker, 1993). By giving participants an opportunity to work with individuals at other institutions, collaboration provides participants a chance to expand personal and professional contacts, and, so doing, may lead to personal and professional growth (Dodge, 1993). At a minimum, it can be a change of pace from regular activities, an opportunity to meet new people and learn new ways of doing things.

LIMITATIONS

Collaborative work may be slower, since participants need to learn about each other and build feelings of trust before they can proceed with the work of the partnership. In some cases, working on relationships is as challenging as determining the goals and tasks of the collaboration. The participants jointly set and agree upon goals and measures of success. The process tends to work better if people are open to changing their opinion, so many faculty who are used to working independently may need to learn to work as a team. Participants should resist a "group think" mentality, and not agree with the group simply to be expedient. Not only should people be willing to change their opinion, they need to be willing to honestly voice their own opinions.

Collaborations may fail if the arrangements are overly oriented to a single institution, resulting in other participants believing that what they are getting out of the relationship is not in proportion to what they have invested in it. At the same time, competitive pressures between institutions may prevent them from negotiating a "fair" arrangement. Some schools may not want to cooperate with institutions with whom they compete for students, research dollars, or government support. Differences between institutions (such as in cultures, standard operating procedures, or reward structures) may also make it difficult for them to work together (Iwanowsky, 1996).

Depending on the scale (number of partners and/or number of programs planned), a special staff may have to be formed to oversee operation. Because of this, collaboration may require new administrative structures or other

restructuring and governance changes. Some of the other problematic features of working in partnerships include: failures of planning and implementation, stress from the time and energy required, logistical problems, disagreements between partners (over resource allocation, partnership role, pedagogy), and disagreements about technology (content of materials being developed, slow delivery of promised goods or promised training) (Baker, 1993).

EXAMPLES

Southeastern Pennsylvania Consortium for Higher Education

A group of eight small private colleges in Pennsylvania formed the Southeastern Pennsylvania Consortium for Higher Education in 1994, in an effort to cut costs. Initially, the schools are collaborating on technology purchases and networking. In addition, faculty at any one institution not teaching a full load may be loaned to one of the other campuses (which can save campuses between $2,000 and $4,250 per course). Ultimately, the schools plan to share electronic linkages and distance-learning courses. Their innovations will affect teaching – the core function of higher education – since faculty are being shared across institutions in a manner that is not typical of higher education. (Education Daily, 1997)

Five Colleges, Inc.

Amherst, Hampshire, Mount Holyoke, Smith, and the University of Massachusetts at Amherst together formed a consortia (Five Colleges, Inc.) to share resources, services and programs. The relationship between the institutions dates back to the late 1800's although it wasn't formalized until 1965. They pooled faculty to create two Five College Departments – Astronomy and Dance – and also confer minors and certificates, as well as make joint faculty appointments. The consortia also offers open club membership, open theater productions, open library access, meal exchange, and course registration exchange for students in good standing. It is run by a 14-member staff. The Board of Directors (including all five college presidents) meets regularly. Forty faculty committees and 25 administrative groups are associated with the consortia, and run the multiple programs that affect both core and support service provided on the campuses. (http://www.fivecolleges.edu/consort.page.html)

Midwestern Higher Education Commission (MHEC)

This is a regional consortium made up of Illinois, Indiana, Kansas, Michigan, Minnesota, Missouri, Nebraska, Ohio, and Wisconsin, which was established in 1991. Voluntary membership is open to all public and private, nonprofit colleges, universities, community colleges, technical institutions, and systems with 501(c)3 status and to state government agencies in the member states. The effort involves 4 full-time staff, 4 part-time consultants;

10 operating committees; and 12 program initiatives. The commission's efforts are supported by member state dues and foundation grants. Its efforts have focused more on support services than on the core functions of the individual institutions. This consortium has multiple programs under way, most of which affect support services:

Academic Scheduling and Management Software (SAMS). This is new software created in response to the needs of commission schools and was offered at large discounts to member institutions. SAMS will lead to savings in utility and maintenance costs, since software will enable schools to schedule classes more efficiently. Through this effort one university plans to save $750,000 in lower utility bills and 70 participants saved $800,000 in the lower purchase price.

Virtual Private Network. This program, which provides low-cost voice, video and data transmission services, especially helps smaller institutions that cannot leverage lower telecommunication rates on their own. Through this network, schools reported getting some of the lowest telecommunication rates in the country.

Interactive Video Program. This program provides members with discounted prices on interactive video equipment. Over 100 colleges, universities, systems and state governments were involved in the contract. They achieved savings from the lower retail pricing offered by the vendors. As a group, they saved more than $7 million in retail pricing. (Murphy & Williams, 1997; Ikenberry, 1997a)

Daytona Beach Community College

The community college, local school board and county government joined together in 1992 to form a health-care-purchasing alliance. Once the president of the college proposed this idea to pool resources and cut costs among the three systems, the benefits managers from the college, school system and county government formed a planning and implementation group. The alliance led to savings of close to $1 million, through lower medical rates and premiums, an improved preventive care system, an enhanced and more-comprehensive provider system, and incentives for preferred providers. (Education Week, 1997; Birkenmeyer and Mojock, 1994)

Western Interstate Commission for Higher Education

The commission is developing ways to provide student services to distance learners and is also pursuing the following activities: identifying successful models for supporting students involved in distance education and disseminating that information, helping institutions in the commission to adopt and modify those models to support their distance learners, and helping the schools to institutionalize these programs. (FIPSE, 1997)

Claremont Colleges

Six California colleges (Pomona, Pitzer, Scripps, Claremont McKenna, Harvey Mudd, and Claremont Graduate School) share resources in several domains: student services (student health center, counseling center, interfaith chaplaincy and central bookstore) and institutional support (campus security, financial and personnel services, telecommunications, risk management, real estate and physical plan maintenance). By pooling resources, the Claremont Colleges have built a tremendous library collection which none of the individual institutions could have done on their own. In spite of pooling resources in many ways, each of the schools has retained its distinctive character (and the colleges do not generally compete for students although they are in close proximity). The Claremont Consortium dates back to October 14, 1925, and while generally focused on support services, affects core services in the sense that students can enroll in classes at the other institutions. (http//www.cuc.claremont.edu/HISTORY.htm).

Parkland College (Illinois)

When the college developed its Occupational Therapy Assistant Program, two local hospitals offered free use of their rehabilitation facilities to the college. While the college spends minimal money on supplies and start-up costs were limited, it has also saved the cost of maintaining and upgrading the equipment. In addition, students are able to conduct their lab work in a completely realistic setting. (Beckman, 1997)

Southeastern Wisconsin Information Technology Exchange (SWITCH)

SWITCH consists of five colleges in Wisconsin working in collaboration and is designed to control costs and identify ways for increasing efficiency through the use of library technology and information systems. It began with an emphasis on library technology but plans to expand its efforts campuswide. The group reports savings in several areas: a major system purchase led to $240,000 in savings; major system operation, $35,000 in savings; shared expertise in personnel and joint purchasing from vendors resulted in $8,500 and $7,500 in savings, respectively. Their efforts combine collaboration and technology. (FIHE, 1997c)

Internet Based Research Center for Independent Colleges & Universities

Currently 12 colleges are involved in a collaboration which involves sharing data, research and insights to help in planning and decisionmaking about a variety of issues. They would like to make it an internet-based research center and expand the number of colleges who have access by putting this information on-line. The center has already saved campuses money by reducing the need for institutional research staff at each institution. They project savings of about $3 million in reduced staff with 26 institutions participating in the center. Campuses involved in the

collaboration have also already raised revenue by jointly developing a Freshman survey. The survey gathered information which was then used to boost retention rates and thus increase student revenue. All 26 partners together could raise as much as $18 million over three years through improved retention, according to their projections. (FIHE, 1997a)

Independent College Fund of New Jersey

Five colleges in New Jersey would like to jointly develop new curriculum that utilizes information technology as well as discipline specific material. The three main features are: joint faculty training in information technology; joint curriculum development; and joint access to specialized equipment and specialized services. Cost savings in these core areas would be achieved through economies of scale. By sharing resources campuses expect to save in each area (all of these are per participant savings): Faculty education and training will save $1,500-$6,000; external consulting costs will be $5,000 to $15,000 less; specialized equipment, $5,000 less; leasing and maintaining web-based server, $10,000 less; and internet access fees will be $15,000 to $5,000 less. Two colleges in particular will benefit because they will be able to offer services that they could not offer on their own. (FIHE, 1997b)

Ohio Foundation of Independent Colleges, Inc. (OFIC)

A group of six Ohio colleges has been involved in a collaborative effort to save money by improving administrative functions, and more specifically by cutting administrative staff positions. The group members brought in an IBM consulting team to teach them about reengineering; following the group session with IBM each campus established internal benchmarks of current performance and studied the potential to improve efficiency and effectiveness. The original group of six would like to expand the number of schools involved. They have benefited from sharing information among themselves and would like to share their "lessons learned" with additional campuses. By sharing expertise they expect to cut costs in numerous domains, and calculate savings and revenue enhancement of $8 million per year. (OFIC, 1997)

RECOMMENDATIONS

For partnerships to work, all the involved parties should benefit from the relationship, and understand how the other parties benefit from the relationship–particularly how their individual involvement affects the experience of the others. In addition, the partnership is more likely to succeed when the partner institutions want to be involved and share the same goals. Each individual institution should be committed to the relationship and have the appropriate people involved to accomplish the goals. Partners assume responsibility for following through with their commitment and solving problems together (Iwanowsky, 1996).

Collaborations work best when they operate by governance through consensus, and each member has equal representation. In addition, some groups have found it best to divide costs equally among participants. However, voluntary participation in each program operated by the consortium is best: members should not be forced to participate in every program. The group members may consider hiring dedicated staff to manage programs and to provide technical assistance to the participants as needed.

Tushnet (1993), in *A Guide to Developing Educational Partnerships*, offers "lessons learned" that are useful to anyone interested in developing or being part of a partnership, although her findings are based on a study of K-12 partnerships. She studied 30 K–12 partnerships funded by the Office of Educational Research and Improvement's Educational Partnership Program. These 30 partnerships were between K–12 institutions and community-based agencies, cultural institutions, private companies, and higher education institutions. The partnerships addressed a range of issues in addition to cost containment: curriculum reform, school-to-work, coordinated social services, and systemic change.

While there was no single model for success, Tushnet compiled a list of principles which make success more likely. Successful educational partnerships: 1) address real problems; 2) can take many forms; 3) build on conversations with all the players that include discussion about the content of activities; 4) communicate with all participants and the community after they have been organized; 5) have people in leadership who build commitment and support activities; 6) provide resources, particularly technical assistance, to those who are expected to change their behavior, roles, and/or relationships; 7) engage in evaluation and adaptive planning; and 8) acknowledge and confront problems. Facilitators to the process of building partnerships include: ensuring adequate time for planning, training, matching people to positions, providing technical support, and building on pre-existing relationships.

A related study by Baker (1993), focused on K–12 educational partnerships involving technology. Again, this research can help inform higher education policymakers as they embark on collaboration. Baker offers several keys to success: shared vision, clearly-defined goals, institutionalized decision-making structure, local decision-making, continuity among partnership personnel, allowing sufficient time for change to occur, and provision of professional development training to teachers. She also suggests carefully choosing people and sites, stating in writing clear roles and expectations, cultivating collaborative skills, and meeting regularly and often.

III. TECHNOLOGY

Technology innovation is a broad term that describes a wide range of advancements, from basic computer equipment that enables the automation of processes that used to be done manually to sophisticated equipment that enables processing of massive amounts of information or teleconferencing and distance education. The core vs. support function "debate" is particularly relevant with technology: Is it appropriate to replace faculty (i.e., human contact) with technology? There is less concern about using technology to automate support function processes. The traditional view of the educational process involves students in class with a faculty member directing instruction. With the growing presence of technology, educators and the public alike are beginning to re-think the learning process, and whether, how much, and what type of personal contact is required for learning to take place.[6]

Technology has, so far, been a mixed blessing for schools because it is one of the main reasons why their costs are escalating, and many question whether computers, in fact, increase productivity. Recently acquired new equipment has high front-end costs. At the same time, technology is viewed as a way to reduce costs (particularly over the long term). Many high-level college and university administrators consider the rising cost of technology one of their major challenges. They view the purchase of new technology as necessary to stay competitive and to prepare students for the evolving economy, but may have a difficult time financing front-end costs. One concern is that since some of the savings from technology may accrue over the long term, schools have not yet been able to benefit financially from their investments.

BENEFITS

The potential benefits of technology appear limitless. Technology can increase access (through distance learning) by increasing the number of individuals who can obtain specific information. With computer technology, remotely situated students can acquire course information (whether videos of lectures or straight text) without having to be on campus. In fact, through a combination of interactive video courses, self-paced courses, telecourses, and extended campus courses, students at Red Rocks Community College in Colorado can complete an associate of arts degree without having to come on

[6] See Young (1997), "Rethinking the Role of the Professor in an Age of High–Tech Tools" for a discussion of how the influx of technology into the classroom may shape the role of faculty.

campus to attend class. The benefits are that the costs per course are as much as 41 percent lower than for traditional courses, and students can complete courses at their own pace (Beckman, 1996). Technology can also promote access by quickly and easily providing individuals greater amounts of information. Vast quantities of information are being put on-line through the Internet and CD ROM.

One of the most important contributions of technology is rather simple: it can help offices to automate, and thus speed up many of their procedures. The University of California at San Diego, for example, streamlined its procurement process by converting a paper-based system to a technology-based system. The cost of processing an invoice was cut from $12.72 to $0.71 and the campus reported nearly $200,000 in total savings. Many campuses are placing course registration, admissions information and applications, as well as financial-aid information, on-line. This contribution not only helps the campus to manage information better and at a lower cost, but also makes students' lives easier by providing immediate access and ensuring that they get consistent information. Institutions are also working to adopt more sophisticated technology, such as multi-media workstations in classrooms to encourage interactive learning.

Some of the reasons why a campus would consider adopting information technology (IT) are described by Massy and Zemsky (1995) in reference to learning technology: 1) economies of scale – while information technology may require a large front-end investment, once it is in place, the usage cost per student is typically low; 2) mass customization – faculty can design individual instruction for students with different needs and skills, information technology thereby being used to enhance the learning environment; 3) vast access to information; and 4) freer time and space requirements for educational activities (IT opens up more forms of communication between faculty and students).

In addition, Ringle and Smallen (1996) note that, if an institution can establish itself as a technology leader, it will be in a better position to attract outside funding and to negotiate good deals with vendors (e.g., be a beta tester). Furthermore, the availability of cutting-edge technology on a campus can serve as a powerful tool for attracting both students and faculty to that institution.

McArthur and Lewis (1997), studied the role of information technology in higher education, but with a focus on the World Wide Web. The researchers conclude that (1) distance learning is the best example of information technology (as opposed to computer-aided instruction (CAI) and computer-based training (CBT)) leading to cost savings; and (2) the Web is a cost-effective way of delivering distance education. Their research refers to international studies that show cost savings are associated with distance

education. However, while it is less expensive to educate a student this way, student performance may not be as high as with conventional teaching methods.

LIMITATIONS

One of the major drawbacks associated with technology is the front-end cost. The expense consists of the cost of hardware, software, and support staff required to operate machinery and train staff and faculty to use the equipment. Another aspect of the expense is the cost of providing students access to computer hardware systems and the Internet. Small colleges, in particular, may also have the problem of not having adequate staff to support the infrastructure and to stay current with changes in the networks, software, and equipment (Ringle & Smallen, 1996). Institutions tend to focus on purchasing new equipment rather than on maintaining and supporting what they already have. And foundations and vendors are more likely to fund innovative projects rather than helping maintain ongoing projects.

Determining the role of technology can be especially challenging at "teaching colleges," which place a high value on personal interaction between instructor and student. As noted, no one knows how much faculty contact is necessary for the learning/teaching process to be successful or whether technology can be as effective as personal contact. Faculty who wish to utilize technology generally lack good information about best practices. They may also lack basic information about what equipment is available or they may not have access to adequate technical support. In addition, many faculty have concerns about intellectual property rights, so may resist putting their work on-line (Gilbert, 1996).

Massy and Zemsky have also documented a few of the barriers that prevent the implementation of technology for instructional purposes, some of which have to do with attitudes and some with not understanding the alternatives. One barrier is the belief in "traditional academic values" (particularly when thinking about IT substituting for faculty labor), as well as the faculty concept of "productivity" as having to do with scholarship (research) and teaching tasks, but not with learning accomplishments. In addition, not only has there been little discussion of alternative teaching methods, but there has been little evaluation of teaching and learning processes. Therefore, it is difficult to compare the trade-offs between information-technology strategies and traditional strategies.

EXAMPLES

Rensselaer Polytechnic Institute (RPI)

RPI faced a $25-million structural deficit and wanted to revitalize its introductory math and science courses. It wanted to both cut costs and make

courses more interesting through the use of technology. The school replaced some lecture courses with "studio" courses, which are more-interactive learning experiences for students. It redesigned the physical space so that students now work at multimedia-based workstations. While the change required an investment in both hardware and software at the outset, RPI is now reporting savings of between $10,000 and $150,000 per course.

Through the advent of the studio course, RPI faculty used the introduction of technology to re-think the way they offered introductory science and math courses. Instead of just automating the course, they changed the physical space, and the roles of students and faculty. The implementation of studio courses enabled faculty to shift some of their focus away from straight contact hours to course-development, research, and professional development. As studio courses have spread across departments, faculty are using existing courses as models for the development of new courses.

Not only does the initiative reportedly save money, but RPI's research shows that studio students are performing as well as or better than students in traditional courses, and attendance is higher in the studio classes. RPI policymakers argue that they have achieved significant productivity gains with the technology-based design, gains made possible because RPI took the opportunity to redesign the process; it did not just apply technology to the traditional way of providing instruction. (Zemsky, 1997)

Antioch University

This multiple-campus system underwent major restructuring and based the centralization plan on an improved computer technology system. It contracted out and upgraded the computer system to manage all of its financial, development, personnel, registration, and admissions activities. At the same time, it changed administration and procedures, as well as people's responsibilities by re-engineering, de-centralizing, and also cutting staff. The university saved about $750,000 in these support services (25 percent of total costs of its central administration). (Guskin, 1994)

Atlanta University

The goal was to provide historically black colleges (HBCU) with access to computerized bibliographic information by connecting them to a network. Not only are campuses connected by librarians, but the librarians are trained to use the system more effectively. The University reported $5,347 in savings from a subscription discount arranged with DIALOG. It also saved money by centralizing the billings process for all of the HBCUs at Atlanta University. (FIPSE, 1997)

Portland State University

Portland State is using educational technology to improve one of its core functions, large lecture courses, which they increasingly rely on due to

limited budgets. The school is planning to train faculty of large lecture courses in how to incorporate educational technology in their courses. The training on course redesign addresses a number of issues, such as determining learning objectives and the cognitive skills needed to achieve them, choosing a learning strategy that includes technology, developing an assessment strategy, and implementing all of the components. (FIPSE, 1997)

University of Utah

The University of Utah is planning to develop an interactive video so that undergraduate students and high school Advanced Placement students can do lab work for the General Chemistry Course in their own kitchen. The availability of the video will mean that more students can access the General Chemistry Course. (FIPSE, 1997)

California State University System

There are hundreds of initiatives under way to cut costs in both the core and support functions of the CSU system. Here are some examples:

The Passport Program allows students to take classes at any one of several campuses without having to apply to each. This resulted in savings of $250,000.

Telephone registration has saved $722,000 and improved quality.

Electronic information kiosks provide confidential information to students, faculty and staff about courses, grades, and general campus information leading to savings of $330,000

A "Preliminary" financial aid system enables students and families to get preliminary financial aid estimates over the phone with an 800 number saving $542,000. (California State University, 1995)

RECOMMENDATIONS

One theme frequently noted in the technology literature is that technology advancement is much more profound than mere automation. Whatever the context (either classroom or office), the introduction of technology can be accompanied by a reconsideration of the process being addressed. New technology provides a chance to rethink old assumptions about how processes are structured and even about how learning occurs. With respect to academics, courses may need to be restructured to take advantage of technology. At the same time, the student/faculty dynamic may also need to be reconsidered, since distance learning limits the opportunity for personal contact between students and faculty. (While in some cases technology may result in less personal contact, it may enable more personalized instruction, or provide a student access to instruction who otherwise would not receive any. All the advantages and disadvantages need to be considered.) In addition, remotely located students may need different types of student support than traditional students.

Based on their research, McArthur and Lewis make several recommendations to higher education policymakers regarding information technology. 1) The authors suggest that current practices of buying things piecemeal does not make sense in the long-term. Rather, in order to build a "broad technology infrastructure" purchases should be part of a planned and systematic effort. 2) Given that electronic communication is a developing area, higher education policymakers have an opportunity to influence the regulatory process. For example, the Telecommunications Act of 1996 does not address, or leaves open to debate, several issues relating to the Internet and possible educational applications. In particular, universal access, consumer protection, intellectual property, and spectrum auctions, are all areas in which education policymakers can participate in the debate at the state and federal level to ensure that educational interests are recognized. 3) In order to prevent increasing gaps between the "haves" and "have-nots" of access to electronic communication, an important goal is to provide universal access. The least expensive method for achieving this is through provision of computers. Colleges and universities have several options, such as directly supplying machines, recycling older computers, or using government vouchers or cross-subsidies to assist student purchases of computers. 4) Faculty developing web-based courseware do not need to re-invent the wheel. They can build on models already available, use off-the-shelf courseware to develop their own from scratch, or gather information from on-line sources and support communities. 5) Increased use of technology should free up some faculty time which could then be dedicated to developing new courseware. 6) As this field evolves educators will need to get involved in the discussion and regulatory development of copyright and intellectual property rights.

In addition, they suggest that existing internet and web models can be used by schools, but that schools choose models that fit with their missions and financial situation, and tailor them to make the best match. They, along with other researchers, recommend that educators take the opportunity to rethink many of their existing assumptions about how instruction is best delivered (Twigg, 1992).

At a broader level, the drive to keep up with technological advances requires commitment and support from the very highest level at an institution (individual and department support may not be sufficient). The process might begin with a needs assessment, after which specific goals can be developed. During this process, intangibles, such as the level of user sophistication on campus and comfort with new technology could be identified. Such intangibles may not be as easy to quantify as other costs and benefits (DeNoia & Swearingen, 1992). One option for supporting technology purchases is to assess student fees, however, some fear that such fees will contribute to the growing gap between "haves" and "have-nots."

Some faculty members may resist technological change. Their resistance can be addressed by giving them an opportunity to work with new technology to learn and understand how it can work for them. The provision of support services and training in how to incorporate technology will also facilitate faculty participation. And, finally, policymakers in higher education should consider how technology is changing the role of faculty and administrators, and whether compensation and incentives policies should be modified to reflect those changes.

V. OUTSOURCING

Outsourcing, which is also referred to as privatization or contracting out, describes the process of a campus contracting with an outside vendor to provide a service rather than providing the service itself. Historically, outsourcing in higher education has been more often associated with the operation of bookstores and food service. However, many other support functions are now being contracted out as well, such as campus health services, computing, custodial, fundraising, mail delivery, maintenance, printing, security, and trademark and licensing (Mercer, 1995). Note that all of these are support services; they do not relate directly to providing instruction – the "core competency" of the institution.

One of the key tasks with outsourcing is to identify services and activities that can be run separately from the core activities of the institution. Core competencies are what make the institution unique, or are most critical to its success. They will vary somewhat across institutions. The line between core activity and support service can be a blurry one as institutions experiment more with outsourcing. For example, an increasing number of institutions are outsourcing their remedial education programs (Gose, 1997). While remedial instruction is indeed instruction, remedial courses are viewed by some as a separate, support activity, because they provide preparation for students to enroll in "regular" courses at the institution. Another example of outsourcing what many consider to be a core service is George Mason University, which contracted out management of a student residence hall (Mercer, 1995). The university had contracted out many other support services in the past, and with this experiment moved into an area that many would consider to be a sacred, or core part of the college experience.

BENEFITS

Several potential benefits are associated with outsourcing. By outsourcing, campus administrators can structure the outsourcing contract so that a vendor bears the cost of bringing in new equipment and technology. In the same way, the institution can bring new levels of expertise and business savvy onto their campus through a vendor. A campus can, in fact, gain access to higher-level capabilities in a variety of domains without having to hire someone on staff (a particular benefit for smaller schools).

Outsourcing may enable a school to gain better control over a function. By awarding a contract, an administrator can more directly link remuneration with completion of a task. The act of writing up a contract forces administrators to clearly spell out their expectations. Going through

the contracting process can help administrators think about which functions are core and which are support. It is possible to contract out some of the extraneous functions, enabling administrators to focus on a narrower set of goals.

Outsourcing permits campuses to take advantage of economies of scale achieved by vendors (who may be providing services on multiple campuses or in other sectors). If the operation is one that requires maintaining a reserve capacity, the vendor, rather than the institution, absorbs the costs of the reserve. And in cases where there is not a constant or consistent need for a service, the campus does not have to keep staff on hand during periods when the service is not needed.

One of the main indirect benefits of outsourcing is that it introduces an element of competition onto the campus. Understanding that services or offices may be contracted out rather than operated in-house makes everyone on the campus start thinking about saving money and improving efficiency.

LIMITATIONS

Some of the limitations associated with contracting relate to the level of expertise and staffing on campus which influence the school's ability to manage a contract. This is probably not a concern at large research institutions, but may well be at small schools. How well can the contracts office specify the terms of the contract: define the service to be provided; write the contract; and enforce the contract? The contract should be crafted so that the campus can maintain accountability and have an "out" if services are not up to expectations. For this reason, outsourcing may place greater demands on management, particularly at public institutions which, as government entities, may face special restrictions on their contracting activities.

Some of the individual complaints that have stemmed from outsourcing arrangements could actually be addressed during the contract negotiation process. For example, at one campus where publication services had been outsourced, each department's publications looked different because each department had set up individual contracts with vendors (Schreiber, 1994). In a second example, a campus had outsourced its counseling services and students complained about having to travel off-campus to receive counseling (Phillips et al., 1996). In the first case, a single vendor could be contracted with to serve the entire campus, with standardized publication specifications written into the contract. In the second case, the vendor could be required to provide counseling services on campus.

Some of the concerns with contracting are more difficult to write into a contract. Critics of outsourcing are concerned that outside vendors may not understand the culture and mission of a campus, some of the most important

characteristics of a campus because they influence a student's (or professor's, or staff member's) experience at that institution. In addition, if a college has to lay off college personnel, staff may feel resistance to the change, and morale will be compromised (there may even be legal battles and union disputes). All of these phenomena can threaten the sense of community and identity on a campus (Thompson and Morgovsky, 1996).

EXAMPLES

University of Pennsylvania

In an effort to save money on facilities management, the university hired a real-estate-management business to manage both its on- and off-campus facilities. The contract is costing Penn $5.25-million per year for 10 years, but the company will be making two payments to Penn (a one-time payment of $26 million and a deferred payment of $6 million) since Penn is helping them to establish a new subsidiary in Philadelphia. Through this outsourcing of support services the university hopes to save as much as 15 percent of its $100 million facilities budget.

In order to protect the 175 Penn staff currently employed by facilities, the new management company is expected to interview and hire some Penn employees (70 percent according to the contract), some staff may retire, and others will be laid off. However, the facilities staff do not want their work to be outsourced and have filed a classaction lawsuit against the university. (Nicklin, 1997; Haworth, 1997)

Brookdale Community College

The college decided to outsource its technology services. It had already contracted out maintenance and groundskeeping (two other support functions), but only after giving the internal units an opportunity to meet newly established performance standards. Some school employees felt betrayed by the college's decision, although many were hired on by the vendor (and all had the opportunity to interview). The school used a consultant to help develop the contract and received bids from multiple contractors. They used the decision to outsource as an opportunity to change the organizational culture and climate at the school, essentially using outsourcing as a management tool. In the process they reduced the number of unionized staff by almost 100. (Thompson and Morgovsky, 1996)

Tufts University

Tufts first outsourced its custodial work in 1974. Officials from the university defended this move by arguing that it freed up their time and energy to focus on the main purposes of the institution: teaching and research. Seventy-one workers switched from the campus payroll to become employees of the outside company. The original contract expired during the summer of 1997, at which point Tufts selected a new company to contract

with. Again, employees were offered the chance to become employees of the new firm, but this time the switch involved a cut in pay. As a result, the affected workers have engaged in protests and pickets, with faculty and students joining the cause. (Nicklin, 1997)

Stanford University

Stanford plans to reduce the size of its facilities operations and contract out for more facilities services. The university will cut its own staff of 40, and then re-hire a smaller number of staff. The remaining staff will be responsible for managing several contracts with companies who will take over the facilities work. The decision to outsource was prompted by complaints about the current staff taking too long and going over budget in their work. (Nicklin, 1997)

RECOMMENDATIONS

Although the literature on contracting in higher education is limited, the process has been studied and implemented a great deal in other sectors, including industry, government, and defense. The lessons learned from these other sectors can inform policymaking in higher education.

Pint and Baldwin (1997) reviewed the military's experience with contracting and identified factors which contributed to its success. In their work they note that contracting works best if an alternative service provider is available, in fact, only if multiple vendors are available who have the interest and capacity to provide the service, since the contract should be awarded through a competitive-bidding process. Therefore, higher education administrators will outsource more successfully if they both know the existing market of service providers and stay current about that market into the future.

Before outsourcing a service, there are several suggested steps for an administrator to go through in order to weigh potential benefits against the costs (Pint and Baldwin, 1997). These steps include evaluating current and desired needs; structuring the relationship to fit the particular service being outsourced; and considering all dimensions of the relationship with the supplier, such as what knowledge and skills the vendor offers, their breadth and depth of experience, how well they have performed other contracts, their financial strength, and commitment to innovation and quality improvement not just cost. Outsourcing works best when the output can be measured and monitored. The campus should work on developing a way to measure performance so that it can evaluate the contractor's completed work.

Coopers and Lybrand has published a guide to assist campuses in choosing between contracting and self-operation (described in *Cause / Effect*, 1993). The guide lists six issues to guide decisionmaking. Some of their suggestions are fairly obvious, such as considering the direct and indirect

costs of each alternative (which means administrators must know what they are currently spending); the impact on service quality; and thinking through the effect on those employees within the functional area and related areas who may be affected by the change. Consideration of the effect on staffing levels, compensation, performance evaluation, and compliance with government regulations is also important, along with consideration of how the change will affect employee morale. The school must have a plan for dealing with any employees who lose their jobs during the transition. However, there are many cases of private suppliers hiring on individuals who formerly provided the service as a university employee.

Other, less-obvious concerns also figure in the considerations: how outsourcing will influence the mission and culture of an institution, how well the school can manage and control each type of service option (will they lose or increase control by outsourcing?), and legal and ethical issues, such as liability, conflicts of interest, tax issues, and whether an appropriate contract can be written and enforced. A recent Supreme Court case (Inter-Modal Rail Employees Association v. Atchison, Topeka and Santa Fe Railway Company) which prevents companies from discontinuing benefits to employees discharged following outsourcing of their jobs, may also have implications for outsourcing in higher education. In sum, a contract needs to be carefully bid, contracted, and managed and performance measures need to be consistently monitored and reviewed periodically to ensure their continued relevance (Robinson, 1991).

VI. OTHER INITIATIVES

As noted, there are many cost-cutting options available to institutions in addition to the primary three described in this report. In this section we describe several "surveys" of higher education institutions that have been conducted to identify trends in cost-cutting initiatives (California Education Roundtable, undated; Hollins, 1992; Beckman, 1996; NAICU, 1997). Although this paper focused on a subset of all the efforts underway in the sector, the data collected from these surveys conducted by California Education Roundtable, NAICU, Center for Planning Information and League for Innovation in the Community College, show the scope and breadth of efforts being undertaken by institutions. Unfortunately, each of the four documents uses different language to describe and categorize the efforts of institutions.

CALIFORNIA EDUCATION ROUNDTABLE

The California Education Roundtable (1995) reviewed initiatives to improve efficiency and maintain quality in the state's three systems of public education (the University of California, California State University, and Community College systems) and the list of initiatives, as well as the framework they use to sort them, are illustrative of some of the other types of efforts going on nationally to cut costs.

Short-Term Cost Reduction

These types of cost-cutting efforts include both salary and hiring freezes, across-the-board cuts (e.g., research, public service, administrative offices, libraries), incentive programs for both early retirement and reduced hours, and cuts in maintenance and equipment purchases. Frequently these cost "savings" will also result in productivity losses. By cutting the number of staff and faculty or programs, the institution will not be able to produce the same level of "output." These initiatives do not involve any changes designed to prevent future cost escalation–some of these expenses are simply being deferred, not actually cut; items such as maintenance will ultimately have to be addressed. Others of these represent substitution, in the sense that by encouraging faculty to retire early, or reducing the number of tenure-track appointments, more senior, expensive faculty are being replaced with less expensive, younger and/or adjunct instructors. Two other efforts that would fit in this category are increased class sizes and increased teaching loads.

Long-Term Cost Reduction And Quality Improvement

In California, and elsewhere, there are examples of initiatives that will reduce costs over the long-term while at least maintaining, if not improving, quality. One category of reforms addresses management systems. By re-engineering management processes, policymakers hope to run things more efficiently and effectively. Technology can play a role in this area, by improving communication and data sharing between different offices and departments. Two well-known examples of new management systems are Total Quality Management (TQM) and Resource Cost Management (RCM). TQM encourages continuous quality improvement by focusing on the customer, getting employees involved in goal setting, and using teamwork to improve production processes. RCM puts "every tub on its own bottom" in the sense that decisionmaking and accountability are shifted down to the unit level. As an incentive to improve productivity, units that save money are able to retain their savings to invest back into their own organization.

Other initiatives include efforts to reduce duplication between campuses (elimination of some programs, merging of others) and to facilitate the ability of students to complete a degree in four years (through improved registration procedures and advising programs, revised core curriculum, and encouraging high school students to engage in college level work). Policymakers are also re-thinking expectations about faculty workload and whether expectations are being met. Some initiatives are aimed at raising revenue rather than cutting costs, through auxiliary activities such as professional degree programs, conference centers, and athletic programs.

NATIONAL ASSOCIATION FOR INDEPENDENT COLLEGES AND UNIVERSITIES

A NAICU report (1996) refers to an earlier survey, which found that, during the 1992-93 school year, schools reported cost-cutting efforts in four areas: facilities (66 percent), nonfaculty personnel (58 percent), fringe benefits (50 percent), and faculty (49 percent) (NAICU news release, Sept. 25, 1996, p. 3).

NAICU describes some of the innovations being implemented by independent colleges and universities attempting to reduce the costs of college to students. The innovations are divided into four broad areas: innovations in college cost and price, campus restructuring, technology, and cooperative/partnership programs.

CENTER FOR PLANNING INFORMATION

The Center for Planning Information surveyed members of several consortia[1] in the fall of 1991 about their cost-containment activities between FY91 and FY92 (Dunn, 1991). The campuses reported a number of cost-cutting strategies, including "freezing non-personnel budgets, cutting equipment and supply budgets, eliminating open positions, and leaving vacant positions of departing faculty and administrative staff" (Dunn, 1991, p. 13). A small number of schools adopted Total Quality Management (TQM encourages continuous quality improvement by focusing on the customer, getting employees involved in goal setting, and using teamwork to improve production processes).

LEAGUE FOR INNOVATION IN THE COMMUNITY COLLEGE

The League collected information from members of its Alliance for Community College Innovation regarding their most-successful and efficient innovations designed to lower costs or increase productivity. They received a large number of submissions and put together a document profiling some of the innovations they consider to be most interesting (Beckman, 1996). The innovations are broken down into several types: Business Operations and Facilities; Curriculum and Instruction; Technology, Networks, and Distance Education; Planning and Budgeting; and Student Services. Several examples are provided in each category. With each example, a brief description of the innovation is provided, along with a listing of the benefits to the college, any external recognition, articles and presentations resulting from the innovation, and contact information.

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[1] The list of consortia include Higher Education Data Sharing Consortium, Public Universities Information Exchange, Southern University Group and the College and University Library Association. The survey had a 66 percent response rate for a sample of 125 institutions, both public and private.

VII. CONCLUSIONS

In sum, each type of initiative holds promise, but experiences will vary across institutions and departments and individuals. Collaboration provides institutions an opportunity to pool resources, facilities, staff, programs, and services. In addition, campuses can join together to obtain better prices through joint purchasing agreements. Technology offers the possibility of putting information (whether course-related or administration-related) on-line, so that it is available to more people, more quickly, more accurately. At the same time, technology may change the way things are done–both office procedures and instructional practices–not just automate traditional processes. In addition, advances in technology are opening up opportunities for new forms of collaboration (sharing library resources electronically, for example). Finally, outsourcing, with a long history in bookstores and food service, is being tried in new service areas. While expanded outsourcing is hailed for introducing "competition" onto a campus, critics worry about outsourcing core services and contractors not sensitive to the culture and identity of the campus.

Our original goal was to assess three different types of cost-cutting initiatives (collaboration, technology, and outsourcing) to evaluate the level of savings they could achieve. While we are able to describe what some campuses are doing in each area, and some of the benefits and limitations of each type of initiative, we are not able to say how much money they have saved, nor assess whether the campus achieved its goals. It was difficult to determine the savings associated with a particular initiative either from lack of documentation in the literature, or in the calculation itself. In addition, there are many non-financial benefits and costs, such as those related to improved quality of service and access, for example, that policymakers may find equally important in their decisionmaking. Potential trade-offs associated with change should be considered, assuming that they can be identified in advance. Some cost-containment measures will have no negative (and perhaps a positive) impact on the quality of education. Others may reduce costs but have negative side effects.[8]

Since past lessons learned and costs savings have not been documented in any systematic fashion, foundations should consider including an evaluation component in their grants to ensure that appropriate data are

[8] Costs can be cut with no negative impact when the cost of delivering a service is cut, but quality remains the same (such as using technology to automate processes). Sometimes reduced costs result in negative effects when, for example, class size is increased and the quality of instruction suffers.

gathered and that lessons learned can be shared. It would be in everyone's best interest to collect such data. More-comprehensive data would enable evaluation of individual efforts, comparison across innovations and across institutions, and provision of information for institutions that are interested in replicating innovations.[9]

Documentation should include more detail about the full cost of implementing the initiative (not just the reported savings) and guidelines for calculating savings, e.g., How much did the new technology cost? What was the salary of any new staff hired to manage the collaboration? What indirect costs were encountered (some of which may be difficult to measure), such as low morale or reduced customer satisfaction? How were cost savings calculated? Over what time period was the change implemented, and how long will it be in place? How did the innovation change the way the program or service is operated? In what way did the innovation surpass or not meet expectations? What were some of the unanticipated effects, whether negative or positive? The answers to questions such as these will help higher education policymakers make more-informed decisions about cost-cutting reforms.

The largest cost savings will potentially result from changes that influence the "core" academic activities of higher education rather than the supporting technology, because a greater proportion of expenditures are dedicated to core functions. But this is precisely where institutions are faced with the quality/cost trade-off, a trade-off that is accentuated by the fact that (especially for liberal arts schools) expenditures per student are often used as a measure of quality: Essentially, from the public's point of view, higher costs mean higher quality and as a result, cost cutting (to lower the price) can be interpreted as a reduction in quality. In addition, until student achievement is measured in higher education, it will be difficult to properly assess the effect of any particular cost-cutting effort on quality. However, there is little consensus about whether or how assessment in higher education could be implemented (Dunbar, 1993).[10]

Clearly, institutions are adopting a wide range of initiatives in their efforts to cut costs.[11] While this paper has mainly focused on collaboration, technology, and outsourcing, many more options are available. The scale of

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[9] See Appendix B for a description of FIHE's *Partnership for Private Colleges* campaign which does include an evaluation component.

[10] A preliminary list of Higher Education indicators has been put together by Elms (1997), along with a list of resources for each indicator. Carey (1987) compiled a list of outcome indicators regarding achievement, participation, and attitudes for K-12.

[11] See Appendix C for a description of several sources of support for these types of initiatives.

the initiatives can vary tremendously; some may be in a single course or office while others may affect an entire campus. Each initiative has its own benefits and limitations, which may or may not be relevant for a particular institution. We have outlined generic issues that policymakers can consider when planning any of these changes. Policymakers might also keep in mind the unique needs, culture, and politics of their institution that also influence how initiatives turn out. In addition, these changes are frequently intended to achieve goals in addition to saving money–all of which is to say that cost cutting is not a straightforward process: There is not a standard calculus into which policymakers can feed information and numbers that will tell them which is the "best" innovation for them (see Appendix D for a list of questions to help guide decisionmaking about the implementation of cost-containment measures). However, the data provided in this report can help inform the decisionmaking process and structure future documentation so that it will be even more useful.

Like the other studies cited here, this paper has been descriptive because the empirical benchmarking related to measuring student outcomes and performance-based indicators remains to be done. Only then can the benefits and costs from various initiatives be more formally calculated. This is an important objective. To achieve this it may be useful to develop a research protocol, framework or outline that individual institutions could follow to provide more reliable estimates on savings achieved through cost-cutting than are available now.

Appendix A: FIHE Survey Data

Table 2*

Percentage of Each Program Type, by Type of Function — Current

	Auxiliary Enterprise	Enrollment Management	Institutional Support	Instruction & Academic Support	Student Services	Total
Collaboration	2	5	7	22	15	52
Outsourcing	3	3	3	2	4	15
Technology	2	3	5	13	8	32
Other	0	0	0	0	0	1
Total	7	11	16	38	27	100

Percentage of Each Program Type by Type of Function — Aspirations

	Auxiliary Enterprise	Enrollment Management	Institutional Support	Instruction & Academic Support	Student Services	Total
Collaboration	1	3	4	12	7	28
Outsourcing	1	1	1	1	1	4
Technology	4	4	9	26	17	60
Other	1	1	1	2	3	8
Total	7	9	15	41	28	100

*Numbers may not add up due to rounding.

Appendix B: The Partnership for Private Colleges

There are examples of people responding to the need for evaluation, e.g., FIHE is working with the RAND Corporation to develop RFP programs which include an evaluation component. When higher education institutions apply for support through the *Partnership for Private Colleges* campaign, they will know from the beginning that evaluation is a required part of the process. In addition, RAND is assisting FIHE in evaluating grant recipients, and will assist FIHE in adjusting the evaluation language as the program proceeds. Ultimately, RAND will work with FIHE to develop a final "Lessons Learned" from the *Partnership for Private Colleges*.

In spring, 1996, FIHE launched the *Partnership for Private Colleges*, a four year $16 million campaign to enable colleges to develop creative and educationally sound strategies to cope with current financial challenges. While cost-cutting pursued for its own sake could seriously impair the high quality educational programs for which private colleges are renown, the campaign seeks to broker partnerships between colleges and the donor community that will result in model programs of cost containment through collaboration and the use of technology. At stake is the goal of protecting independent colleges' unique character, quality, and effectiveness while assuring new efficiencies of program delivery.

The *Partnership for Private Colleges* has been created to support and encourage the efforts of private colleges and universities to contain costs through collaboration and the innovative uses of technology. The institutions receiving funding for these joint programs will reap immediate benefit. A longer term goal of the *Partnership* is to assess the results of all funded programs and promote them as replicable models for other institutions to adapt and develop in their own cost-containment programs. In short, the partnership hopes to achieve immediate results which have long-range and much expanded consequences.

The Foundation's policy is to work closely and responsively with donors in developing the kind of project they wish to fund within the framework of the Partnership. The resulting Request for Proposals to which the colleges will be invited to respond will carefully state the submission criteria, eligibility requirements and application procedures that reflect the mutual interests and priorities of the donor, the Foundation, and the affiliated colleges.

Appendix C: Sources of Additional Data, Funding, and Information on Cost Cutting Initiatives

FIHE Survey Data

As noted in the text, FIHE affiliated colleges described the goals of the current initiatives, total costs (start-up and operational), the financial benefits (annual benefit and expected project life), and non-financial benefits. We do not know which initiatives have been successful by any objective measures, and we do know what kinds of programs they consider to be their most innovative and successful. http://www.fihe.org/index.htm

NACUBO

NACUBO presents the "Resource Enhancement Award" to colleges and universities adopting initiatives that reduce costs, increase revenues, or improve productivity. Call Mary Beth O'Donnell (202 861-2529) for information about the individual winners. http://www.nacubo.org/

Cost-Effective Uses of Technology in Teaching (Andrew W. Mellon Foundation)

The Andrew Mellon Foundation has awarded numerous grants to schools as part of its initiative to "test technology projects that enhance learning in cost-effective ways." (from their web site) It is trying to focus on the cost-effectiveness of initiatives, but does not want to forget about quality of educational outcomes. Rather than funding the purchases of new equipment, it wants to "leverage" existing resources: Rather than just computerizing existing processes, it wants to rethink old ways of doing things. Of particular interest to the Mellon Foundation are initiatives that integrate technology into foreign-language instruction or bring together campuses in consortial arrangements. http://www.mellon.org/cutt.html

American Association of Higher Education Quality Initiative

The American Association of Higher Education (AAHE) Quality Initiative applies Continuous Quality Improvement (CQI) principles to higher education. While relatively new to Higher Education, CQI has been utilized in business for several years. CQI is billed as a method for helping schools do "more for less." Beginning in 1993, AAHE partnered with the William C. Norris Institute to support 21 institutions, some of which already had experience with CQI, to build on those efforts.

The first initiative, the Academic Quality Consortium (AQC) involved collaboration between participating institutions having prior experience with CQI. The project was structured so that the participating institutions could

share information and learn from each other's experiences. In this way the small group with prior experience became a "learning laboratory." In the second initiative (CQI), the knowledge gained from the first cohort will be shared with a wider audience. With the information it has its gathered, and its continued monitoring of efforts across the nation, the AAHE serves as a clearinghouse of information on CQI. http://www.aahe.org/cqi_new.htm

The Pew Charitable Trust and the Higher Education Roundtable

In conjunction with the Institute for Research on Higher Education, PEW facilitates a national dialogue on main issues facing higher education, such as cost, quality teaching and learning, and access. It does this by hosting a series of roundtable discussion and publishing *Policy Perspectives*. Pew recognizes higher education institutions that have "undertaken bold steps to reform and revitalize the organization and management of their campuses for the purpose of improving undergraduate education" by awarding the Pew Leadership Award for the Renewal of Undergraduate Education. http://www.irhe.upenn.edu/eqw/

National Center for Postsecondary Improvement

This is a research project on improving productivity, accountability, and efficiency. Its six research areas are mapping quality concepts into undergraduate education; information technology as an enabler and driver of change; quality assurance and accountability; benchmarking; and action agenda for improving productivity, accountability, and efficiency (which will integrate the 6 parts into a coherent whole). http://ncpi.stanford.edu/

EDUCOM's Educational Uses of Information Technology

EDUCOM's National Learning Infrastructure Initiative (NLII) has three primary goals relating to the utilization of learning technology: "1) improve the quality of teaching and learning; 2) contain or reduce rising costs; and 3) provide greater access to education."

In addition, EDUCOM has published a document called 101 Success Stories of Information Technology in Higher Education; The Joe Wyatt Challenge, A Project of EDUCOM's Educational Uses of Information Technology. http://www.educom.edu/

FIPSE

One source of funding is through the FIPSE "Controlling the Cost of Postsecondary Education" program. In addition, FIPSE has several "lessons learned" documents about initiatives that it has funded. Some of these FIPSE initiatives, however, are not necessarily about saving money or

increasing productivity, although money may be saved in the process of implementing other types of higher education initiatives.
http://www.ed.gov/offices/OPE/FIPSE/

Hitachi Foundation

The Hitachi Foundation is targeting education institutions in a new effort to "support projects that use information technologies to improve and advance teaching and learning." In particular, they are looking for projects that focus on underserved populations. The projects should "evaluate the role of technology in teaching and learning; assess the successes and challenges of using technology in education; advance current teaching and learning; and identify critical gaps on using technology to strengthen teaching and learning."

University of Delaware

The University is using a FIPSE grant to build on a database which it began in 1992 to document instructional costs and productivity. It is collecting data from institutions across the country and an increasing number of institutions are participating. Institutions can use the data to identify costs by academic discipline in order to enhance academic planning.
http://www.ed.gov/offices/OPE/FIPSE/

Appendix D: Key Questions for Higher Education Decisionmakers

While no single best model for cutting costs exists, institution-level decisionmakers can assess multiple options in a structured manner. The following questions can help guide the early stages of the process and the second set of questions can help decisionmakers assess initiatives that have been implemented.

Initial Questions

Some key questions for higher education policymakers to consider at the outset are:

- What specific goal(s) are you trying to achieve? Can you narrow your focus?
- In what areas are your costs increasing the most? What factors are affecting costs at your institution?
- Do you want major savings, or is cutting at the periphery acceptable (core vs. support services issue)?
- What trade-offs are you willing to make (between cost, quality, morale, etc.)?
- Are you willing to eliminate any staff who do not agree to go along with the change?
- Have you developed a method for measuring the success of the innovation?
- Have you compared the pros and cons of multiple alternatives?

Evaluative Questions

In addition, policymakers might ask themselves several questions as they evaluate the initiatives they implement:

- What specific changes in operations have been made as a result of activities supported and/or instigated by the grant?
- What are the projected cost savings that have been achieved as a result of these changes? Describe the basis for estimates. Have other factors such as changes in enrollment or preexisting restructuring efforts affected these estimates?
- Did the character of instruction or services provided by the institution change as a result of the operational changes? Are further changes likely?
- What were your expectations concerning the changes to be made before you began and how have the actual changes described in your answer to the first question above differed from your expectations? If expected outcomes and actual outcomes are significantly different, why do they differ and what lessons do you draw from this that may be valuable to other institutions facing similar situations?

• Is there any general advice that you would provide others who may try changes similar to yours?

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